



Techniques for effective research with IEEE Xplore

in collaboration with

‘Military Institute of Science and Technology’

Speaker

Ranbir Singh

IEEE International Client Services Manager
India, Middle East (Asia), Africa, Bangladesh

MAY 30, 2024

About the IEEE

- IEEE is a leading authority and trusted voice in a wide variety of areas ranging from electrical engineering, telecom, computing, aerospace, AI, semiconductors, power and energy, sustainability and more
- Not for profit “Advancing Technology For Humanity”
- World’s largest technical professional organization with over 450,000 members globally
- Core areas of activity:
 - Membership organization
 - Conferences organizer
 - Standards developer
 - Publisher of leading journals, conferences, standards, eBooks, and eLearning
- IEEE *Xplore* digital library by the numbers:
 - More than 6 million total documents
 - More than 24 million downloads per month
 - Over 8 million unique users each month

140
YEARS

*Celebrating 140 Years of
Advancing Technology for Humanity*



IEEE Smart Village Activities

A volunteer network empowering off-grid communities through education and the creation of sustainable, affordable, locally owned entrepreneurial energy businesses serving 70,000 people in 280 villages in Cameroon, Haiti, Nigeria, Kenya, South Sudan, Himalayas, India and more.

smartvillage.ieee.org



IEEE Action on Climate Change

IEEE is committed to helping combat the effects of climate change through pragmatic and accessible technical solutions and providing engineers and technologists with a space for discussion and action. IEEE has also developed a climate change collection of articles on IEEE *Xplore*. climate-change.ieee.org

IEEE Changes the World

IEEE's mission is to advance technology for the benefit of humanity. IEEE:

- Leverages the strength and reach of the IEEE network to make a difference around the world
- Supports the vision of IEEE members globally carrying out and/or supporting impactful humanitarian activities at the local level
- Focuses on building partnerships with local communities, entrepreneurs, and stakeholder groups
- Encourages the adaptation and implementation of appropriate technology
- Increases community capacity building to support local sustainability



IEEE
Humanitarian
Technologies
Board

EPICS^{IN}IEEE

IEEE SIGHT
Special Interest Group on
Humanitarian Technology

MOVE COMMUNITY
OUTREACH
AN IEEE★USA INITIATIVE



IEEE Foundation



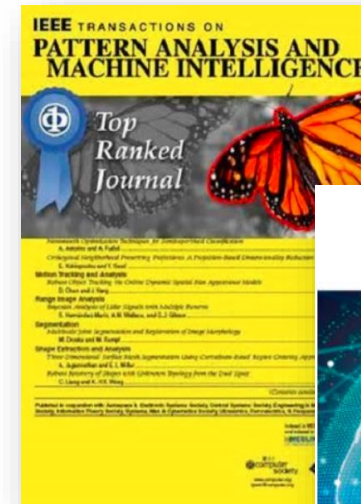
IEEE Publications: Stay Current with Quality, Trusted Resources

- Latest studies reinforce that the top cited publications in the world are from IEEE*
 - 15 of the top 20 journals in Electrical and Electronic Engineering
 - 10 of the top 10 journals in Telecommunications
 - 3 of the top 5 journals in Automation & Control Systems
 - 5 of the top 10 journals in Computer Science: Artificial Intelligence
 - The top 3 journals in Computer Science: Cybernetics
 - 3 of the top 5 journals in Computer Science: Hardware & Architecture
 - 3 of the top 5 journals in Computer Science: Information Systems
- Cited in patents nearly 3x more than any other publisher**
- Recent user studies demonstrate that researchers rely on IEEE *Xplore* to:
 - Increase productivity
 - Save time by not reinventing the wheel
 - Keep up-to-date on emerging technologies

* Source: Journal Citation Reports (Clarivate Analytics, 2023)

** Source: 1790 Analytics

More info: www.ieee.org/citations and www.ieee.org/patentcitations

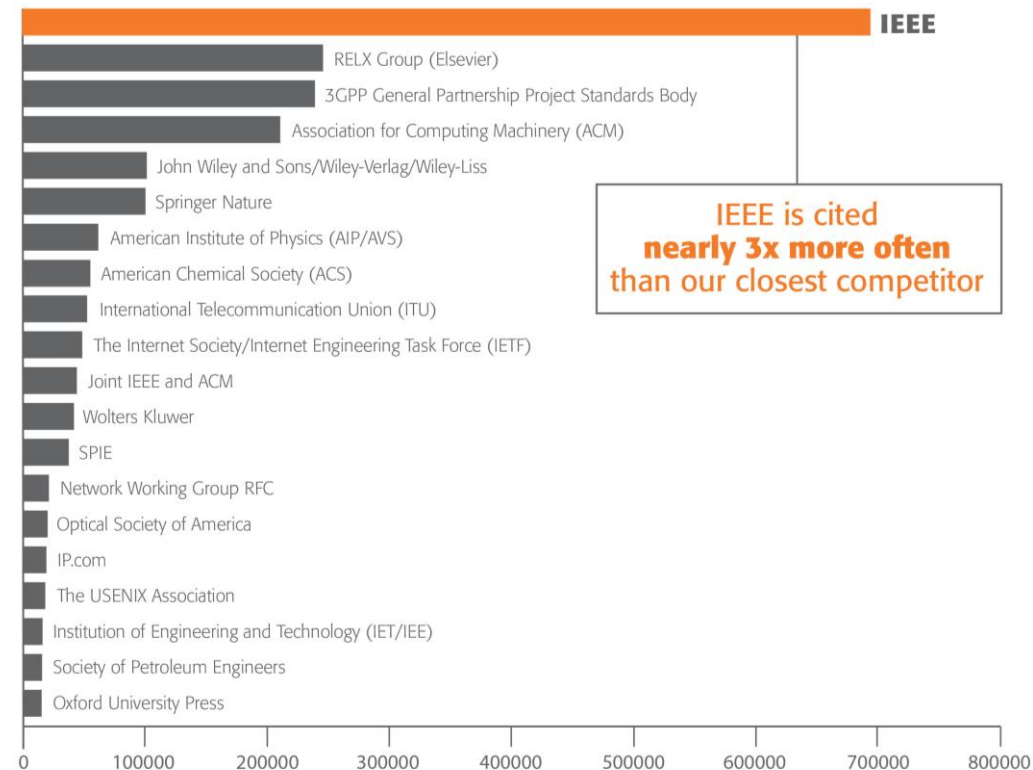


IEEE Research Powers Patents

IEEE is the most-cited publisher in new patents from top patenting organizations.

- Patent referencing to IEEE **increased over 842%** since 1997
- Inventions that build upon IEEE publications are more likely to be cited in the future
- The importance of sci-tech literature in patents is rising
- IEEE dominates in patents related to **Artificial Intelligence, Autonomous Vehicles, and Internet of Things**

Number of U.S. Patent References from Top 50 Companies to Top 20 Publishers



Source: 1790 Analytics LLC, Copyright 2023

More information available at: www.ieee.org/patentcitations

New IEEE Journal Titles in IEEE Xplore

Launched last year:

- IEEE **Open Journal** of Systems Engineering
- IEEE Transactions on AgriFood Electronics
- IEEE Transactions on Machine Learning in Communications and
- IEEE Journal of Indoor and Seamless Positioning and Navigation
- IEEE Transactions on Energy Markets, Policy and Regulation
- IEEE Microwave and Wireless Technology Letters
- IEEE Transactions on Radar Systems

This year 2024*:

- IEEE **Open Journal** on Immersive Displays
- IEEE Journal of Selected Areas in Sensors
- IEEE Transactions on Privacy
- IEEE Systems, Man, and Cybernetics Letters
- IEEE Reliability Magazine
- IEEE Transactions on Materials for Electron Devices
- IEEE Data Descriptions
- IEEE Sensors Reviews

IEEE Open Journal of
Control Systems

2022 Volume 1 IOJCD4 (ISSN 2694-085X)

An Open Access Journal of
the Control Systems Society
IEEE
Control Systems
Society



IEEE Open Journal of
**Instrumentation and
Measurement**

2022 Volume 1

An Open Access
Publication of the
IEEE Instrumentation and
Measurement Society
IEEE
Instrumentation
& Measurement
Society



IEEE JOURNAL ON
FLEXIBLE ELECTRONICS

A PUBLICATION OF
THE IEEE SENSORS COUNCIL
THE IEEE ELECTRON DEVICES SOCIETY
THE IEEE CIRCUITS AND SYSTEMS SOCIETY

IEEE
Sensors Council

EDS

CAS

JANUARY 2022 VOLUME 1 NUMBER 1 JFEBL (ISSN 2768-167X)



IEEE



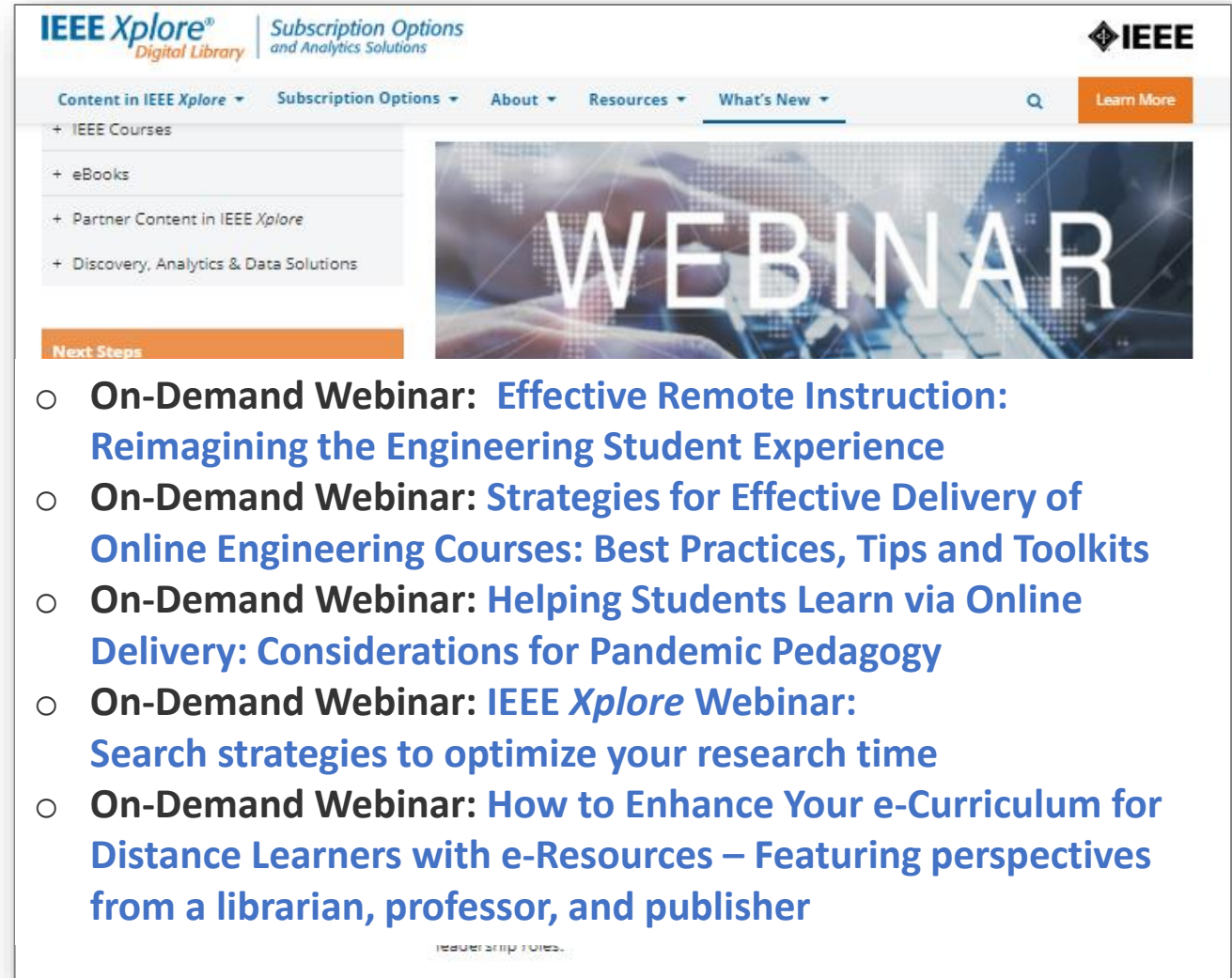
IEEE

RESPONDING TO TODAY'S PANDEMIC:

Free Resources from IEEE

- IEEE has a variety of live and on-demand webinars available to help universities and technology organizations adapt their curriculums and research strategies to support distance learning and remote work environments.
- Other available webinars provide tips and best practices to help researchers stay up to date by using intuitive new tools delivered by IEEE *Xplore*. We also offer resources to help authors get published and share their research with the technical community.
- Below is a link to register for upcoming and recorded sessions. All are free to attend and we encourage you to share this information with your colleagues.

<https://innovate.ieee.org/free-webinars-from-ieee/>



The screenshot displays the IEEE Xplore Digital Library website. At the top, the navigation bar includes links for 'Content in IEEE Xplore', 'Subscription Options', 'About', 'Resources', and 'What's New'. A search icon and a 'Learn More' button are also present. Below the navigation bar, a sidebar lists categories: '+ IEEE Courses', '+ eBooks', '+ Partner Content in IEEE Xplore', and '+ Discovery, Analytics & Data Solutions'. The main content area features a large banner with the word 'WEBINAR' in white text over a background image of hands typing on a keyboard. Below the banner, a section titled 'Next Steps' lists five upcoming webinars:

- **On-Demand Webinar: Effective Remote Instruction: Reimagining the Engineering Student Experience**
- **On-Demand Webinar: Strategies for Effective Delivery of Online Engineering Courses: Best Practices, Tips and Toolkits**
- **On-Demand Webinar: Helping Students Learn via Online Delivery: Considerations for Pandemic Pedagogy**
- **On-Demand Webinar: IEEE Xplore Webinar: Search strategies to optimize your research time**
- **On-Demand Webinar: How to Enhance Your e-Curriculum for Distance Learners with e-Resources – Featuring perspectives from a librarian, professor, and publisher**

At the bottom of the list, there is a link for 'Readership Notes'.



Has access to

IEEE
Xplore[®]
Digital Library

Access via
IP

IEEE All-Society Periodicals Package & Proceedings Order Plans

- ~200 IEEE online society-sponsored journals, transactions, and magazines - 360,000 documents available in HTML as well as the original PDF format
- More than 1.3 million papers from all IEEE-sponsored annual conferences
- Complimentary access to content from Nokia's Bell Labs Technical Journal
- Complimentary access to more than 18,000 papers from 20+ VDE conference titles
- Backfile of conference and journals is 2017

Free Remote Access Options

****To be enabled ON-Campus**



IEEE Remote Access

Users can enable this **free** feature on their devices, to access IEEE full-text articles when away from campus. [Click here](#) to **download** next steps and access the video tutorial [here](#).

Google Scholar CASA

CASA (Campus Activated Subscriber Access) is another **free** tool for users to access full text articles outside the campus, linked from Google Scholar. [Click here](#) to **download** next steps.

SSO

(for Library use only)

Provides **free** tool for off-campus access to scholarly e-resources, with single sign-on. [Click here](#) to **download** next steps.

Military Institute of Science and Technology

IEEE Usage – Oct 2023 – Apr 2024

Title Type	Total	Oct-2023	Nov-2023	Dec-2023	Jan-2024	Feb-2024	Mar-2024	Apr-2024
IEEE Conferences	4040	452	922	807	620	513	486	240
IEEE eLearning Library Courses	1	0	0	0	0	1	0	0
IEEE Journals	2917	424	378	470	349	783	378	135
Partner Journals	11	3	3	2	0	2	1	0
Total	6969							



~752 Technical Documents

IEEE Xplore®
Digital Library

Conferences (722)

Journals (30)

Early Access Articles (-)

Publication Title

Enter Title

- ☐ 2021 5th International Conference on Electrical Engineering and Information Communication Technology (ICEEICT) (35)
- ☐ 2023 26th International Conference on Computer and Information Technology (ICCIT) (30)
- ☐ 2024 6th International Conference on Electrical Engineering and Information & Communication Technology (ICEEICT) (23)
- ☒ IEEE Access (22)
- ☐ 2014 International Conference on Electrical Engineering and Information & Communication Technology (21)
- ☐ 2016 3rd International Conference on Electrical Engineering and Information Communication Technology

Publication Topics

Enter Topics

- ☐ Neural Network (77)
- ☐ Convolutional Neural Network (72)
- ☐ Machine Learning (69)
- ☐ Renewable Energy (64)
- ☐ Support Vector Machine (62)
- ☐ Learning Algorithms (56)
- ☐ Deep Learning (53)
- ☐ Mobile App (47)
- ☐ Artificial Neural Network (45)
- ☐ Bit Error Rate (45)
- ☐ Solar Energy (45)
- ☐ Power Consumption (44)
- ☐ Bit Error (40)
- ☐ Solar Panels (39)
- ☐ Photovoltaic System (37)

Author

Enter Author Name

- ☒ Muhammad Nazrul Islam (76)
- ☒ Md. Mahbubur Rahman (35)
- ☐ Md Hossam-E-Haider (34)
- ☐ Hussain Nyeem (26)
- ☐ Abu Jahid (24)
- ☐ Md Aminul Islam (21)
- ☐ Md. Tawfiq Amin (20)
- ☐ Sunjida Sultana (14)
- ☐ S. P. Majumder (14)
- ☐ Md. Afzal Hossain (13)
- ☐ Nusrat Sharmin (13)
- ☐ Omar Faruqe (12)
- ☐ Nafiz Imtiaz Khan (12)
- ☐ Tasmiah Tamzid Anannya (11)
- ☐ Md. Mahadi Hasan (11)
- ☐ Wali Mohammad



Year

☒ Range

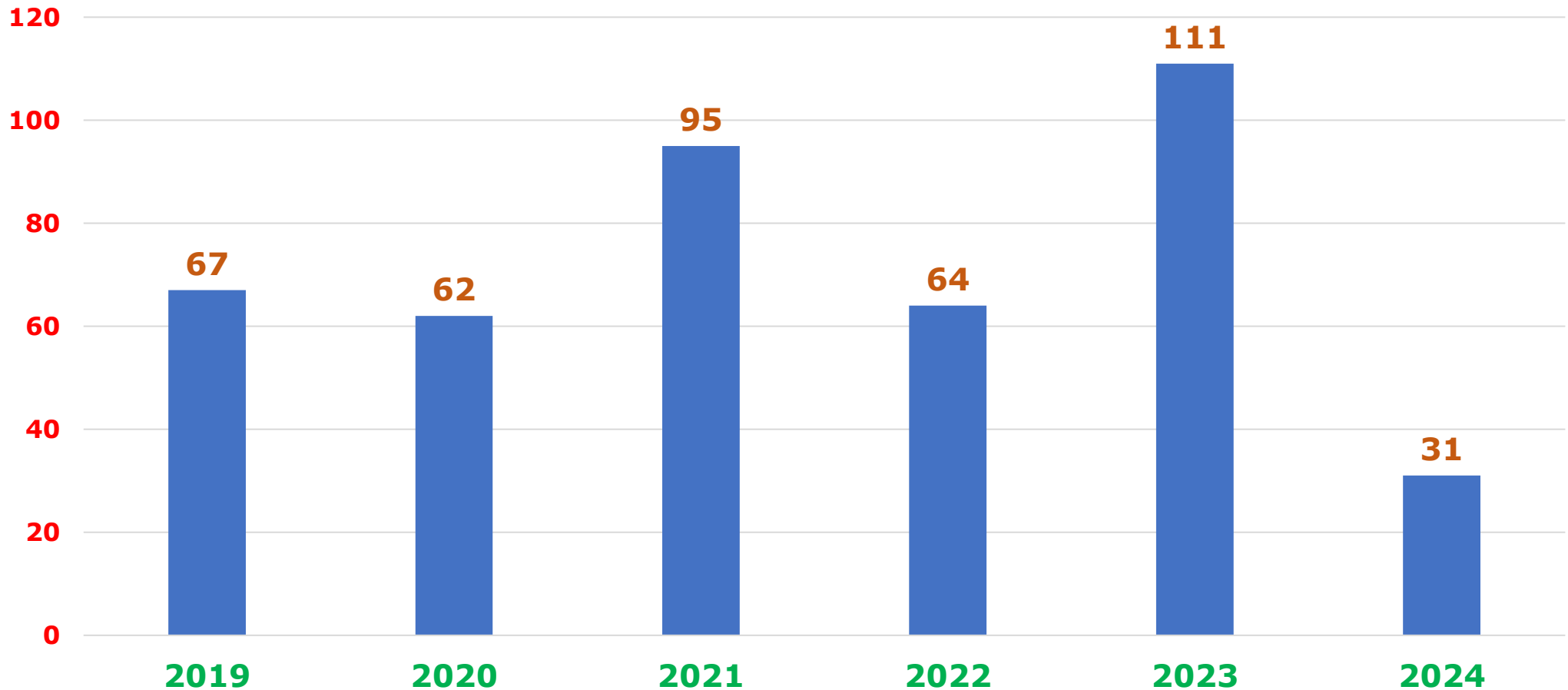
☐ Single Year

2005

2024



of articles from 'MIST' in IEEE from last five years



Source – IEEE Xplore – as on May 29, 2024

IEEE Open Science Initiative

What is Code Ocean?

<https://codeocean.com>

An online code reproducibility platform that integrates with any scholarly platform.

- Authors can publish code and datasets
- Code Ocean's widget appears on the article page
- Users and readers can start building upon other published findings
- Users get the same computational environment the original author used. No setup and installation needed
- Users can work with a suite of tools: Jupyter, Code versioning, collaboration, flexible computing etc
- Or you can export that compute capsule and work outside of Code Ocean. It's an Open Platform
- Published Compute Capsules are minted with a DOI and are open access
- code+data can now be peer-reviewed

Article
Home
Page

Code
Ocean

The screenshot shows the IEEE Xplore Digital Library interface. The article title is "When Slepian Meets Fiedler: Putting a Focus on the Graph Spectrum" by Dimitri Van De Walle, Polina Demestrescu, and Maria Gloria Preli. It is published in IEEE Signal Processing Letters, Volume 24, Issue 7, July 2017. The article has 7 pages and 957 full-text views. It is marked as "Code Available" and "Open Access". The abstract discusses the study of complex systems using graph models and the eigendecomposition of the graph Laplacian. A Code Ocean widget is embedded below the abstract, showing a "Graph Slepian" capsule. The widget interface includes a "Run" button, a "Published Version 1.0" label, and a list of files such as "fig-main-plot.png", "fig-main-selection.png", "fig-main-spectrum.png", "fig-main-embedding.png", "fig-slepian-plot.png", "fig-slepian-selection.png", "fig-slepian-spectrum.png", "fig-slepian-embedding.png", "fig-slepian-filtered.png", and "fig-slepian-output.png". The widget is powered by Code Ocean.

What is IEEE DataPort?

<https://iee-dataport.org/>

A web-based, cloud services platform supporting the data-related needs of the global technical community

- Stores **datasets up to 2TB each and enable** deposits of multiple data files (indefinite data storage)
- Store up to 10TB each if a user is a member of a Premium IEEE *DataPort* Institutional Subscriber
- Open access option available to researchers
- Helps researchers comply with funder data requirements
- Datasets can be linked to IEEE *Xplore* articles
- Datasets **are minted with a DOI**
- Citations are formulated and provided in multiple formats for users
- Integrated with ORCID; users can optionally have the IEEE *DataPort* dataset asset automatically added to their ORCID asset list
- Can support and facilitate Data Challenges
- Can store and link related documentation – scripts, visualizations, related documentation
- Fully integrated with Amazon Web Services (AWS) to facilitate data analytics

IEEE DataPort

DATASETS | COMPETITIONS | SUBMIT A DATASET | SEARCH

IEEE

Get More out of IEEE DataPort with an Institutional Subscription

Learn More »

WHY IEEE DATAPORT?

Store, search, and access standard or Open Access datasets up to 2TB. Learn More

ACCESS DATASETS

Login for freely available Open Access datasets or subscribe for full access. Learn More

SUBMIT A DATASET

Storing and sharing your datasets on IEEE DataPort is completely free. Learn More

USE CASES

Read use cases and articles, or have insights, and datasets delivered to your inbox. Learn More

DATASET CATEGORIES

- Artificial Intelligence (490)
- Astronomy (8)
- Biomedical and Health Sciences (197)
- Biophysiological Signals (76)
- Cloud Computing (37)
- Communications (252)
- Computational Intelligence (169)
- Computer Vision (248)
- COVID-19 (56)
- Demographics (11)
- Ecology (6)
- Education and Learning Technologies (6)
- Environmental (39)
- Financial (17)
- Geoscience and Remote Sensing (98)
- Image Fusion (33)
- Image Processing (358)
- IoT (154)
- Machine Learning (574)
- Other (325)
- Power and Energy (239)
- Reliability (50)
- Security (113)
- Sensors (110)
- Signal Processing (234)

Magnets for low Emission Rings: An Overview

A Center of Mass Estimation and Control Strategy for Body Weight Support...

CLOUD ATTACK DATASET

data of fishing operations

Channel State Information Datasets for 5G New Radio System Based on Ray-Tracing

OPPORTUNITY Activity Recognition Dataset

Modified MADDPG

Miss

IST-PaniniDataset

Performance of Microservices Result Data

radar data sardinia

AI-based Automated Extraction of Entities, Entity Categories and Sentiments on...

Comments or Issues: Where to Document Technical Debt?

VQA-RADPH

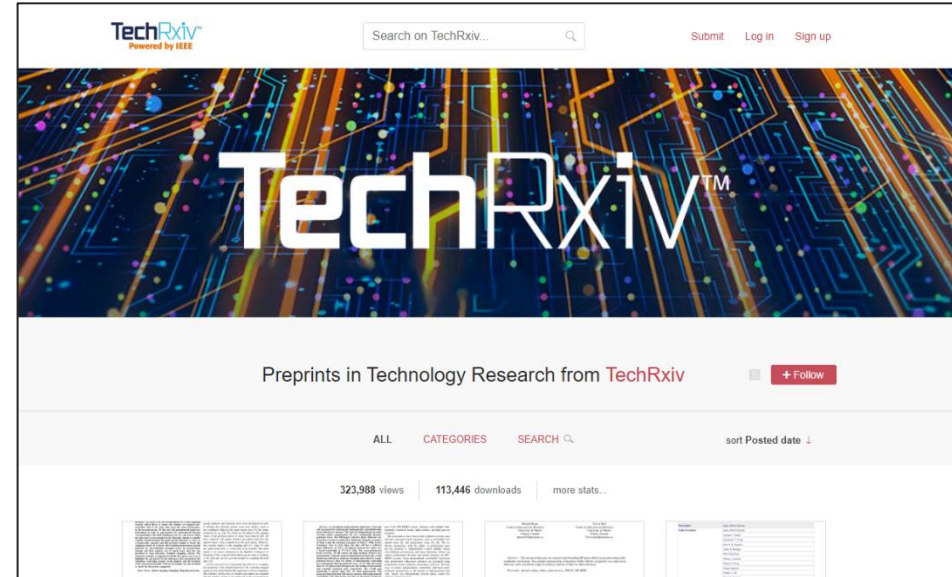
VIG-Track Dataset

OASIS2 images for dementia classification by machine learning

TechRxiv™ Preprint Server

- An open, moderated repository for unpublished and pre-review research in electrical engineering, computer science, and related technology.
- Authors can quickly disseminate their work to a wide audience to gain feedback of a draft version and claim credit for their unpublished research.
- Aim is to increase the accessibility of scientific findings, improve research, and build the future of scholarly communication.
- Authors can post preprint papers to TechRxiv regardless of where they eventually intend to submit and publish the paper.
- TechRxiv is for preprint research only. All submissions are screened prior to acceptance but are not peer reviewed.

<https://www.techrxiv.org/>



Between 2022-04-10 - 2023-04-10 ▼ TechRxiv had:

👁 **2,772,308 views**

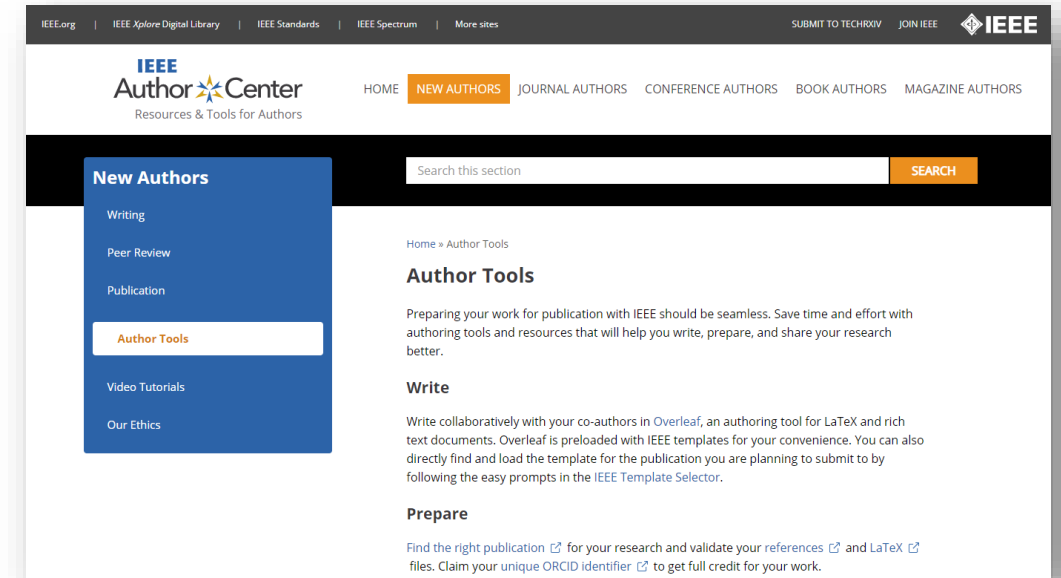
📄 **1,408,320 downloads**

IEEE Tools for Authors

Get your article ready for submission quickly with help from IEEE Author Tools

► IEEE Author Support Tools:

- Find the right periodical or conference for your research with the **IEEE Publication Recommender**
- Download your article template easily with the **IEEE Template Selector**
- Analyze your article's LaTeX files prior to submission to avoid delays in publishing. The **IEEE LaTeX Analyzer** will identify potential setbacks such as incomplete files or different versions of LaTeX.
- Verify your reference list with the **IEEE Reference Preparation Assistant**
- Test if your article will display properly in IEEE Xplore® Digital Library with the **IEEE PDF Checker**



IEEE Author Center:

<https://ieeauthorcenter.ieee.org/>

Live Demo



PROBLEM

Need an article on big data and machine learning in smart grids (SG), focusing on the Internet of Things (IoT). It also addresses cyber security concerns .

SOLUTION = IEEE Xplore ??

Research Query

Basic Search

big data and machine learning = 21,556

"big data" AND "machine learning" = 16256

Search with in

IoT OR "internet of things" AND "security concerns" = 1606

Journal

268

Sort by

Most popular

Advanced Search

Affiliation =

Meta Data PLL OR "phase locked loop" AND Noise AND Cancel*

Publication Title AND Solid State

Questions

Ranbir Singh
r.sedhey@ieee.org
+91 9501555001

